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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/619,693      | 07/15/2003  | Roger Simpson        | BW-DKT00047A        | 7136             |

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EXAMINER

CORRIGAN, JAIME W

ART UNIT PAPER NUMBER

3748

DATE MAILED: 04/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                       |  |
|------------------------------|--------------------------------------|---------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/619,693 | <b>Applicant(s)</b><br>SIMPSON, ROGER |  |
|                              | <b>Examiner</b><br>Jaime W Corrigan  | <b>Art Unit</b><br>3748               |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7-15-03</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eguchi (PN 6,311,658) in view of Jung (PN 5,941,202).

Eguchi discloses a variable camshaft timing phaser (See Figure 1 (20), (30), (40), (50)) having a center mounted spool valve (See Figure 1 (80)), wherein a null position is hydraulically controlled (See Column 5 Lines 11-53), the phaser having a plurality of angular relationships (See Abstract);.

Eguchi fails to disclose an electromagnetic locking mechanism; and a locking plate interposed between the phaser and the locking mechanism; a second plate rotably coupled to the locking plate during an unlock state; a strap drive interposed between the phaser and the locking plate for biasing the locking device toward the electro-magnetic locking mechanism; the electromagnetic locking mechanism comprising a coil; the angular relationships include the angular relationship between a cam shaft and the crank shaft, or two cam shafts; the driven shaft is a cam shaft; the driving shaft is a crank shaft; the driving shaft is a camshaft.

Jung teaches that it is conventional in the art to utilize an electromagnetic locking mechanism (See Column 2 Lines 50-63); and a locking plate (See Figure 1 (40)) interposed between the phaser (See Figure 1 (6)) and the locking mechanism (See Figure 1 (14), (18)); a second plate (See Figure 1 (16)) rotably coupled to the locking plate during an unlock state; a strap drive (See Figure 1 (8)) interposed between the phaser and the locking plate for biasing the locking device toward the electro-magnetic locking mechanism; the electromagnetic locking mechanism comprising a coil (See Figure 1 (14)); the angular relationships include the angular relationship between a cam shaft and the crank shaft (See Abstract), or two cam shafts; the driven shaft is a cam shaft (See Abstract); the driving shaft is a crank shaft (See Abstract); the driving shaft is a camshaft (See Abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the electro-magnetic locking mechanism taught by Jung in the Eguchi device since it would improve timing control.

### **Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Schebitz (PN 5,785,018), Wiehl (PN 5,765,517) disclose similar phasers.

Any inquiry concerning this communication from the examiner should be directed to Examiner Jaime Corrigan whose telephone number is (703) 308-2639. The

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examiner can normally be reached on Monday - Friday from 8:30 a.m. – 6:00 p.m. 2<sup>nd</sup>  
Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reached on (703) 308-2623. The fax number for this group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

JC

Jaime Corrigan

*Jaime Corrigan*  
Patent Examiner

April 19, 2004

Art Unit 3748

**THOMAS DENION  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700**